

Challenges in Hydrogen Fuel Cell Vehicles

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***Abstract:** Nowadays, the combustion of fossil fuels for transportation has a major negative impact on the environment. All nations are concerned with environmental safety and the regulation of pollution, motivating researchers across the world to find an alternate transportation fuel. The transition of the transportation sector towards sustainability for environmental safety can be achieved by the manifestation and commercialization of clean hydrogen fuel. Hydrogen fuel for sustainable mobility has its own effectiveness in terms of its generation and refueling processes. As the fuel requirement of vehicles cannot be anticipated because it depends on its utilization, choosing hydrogen refueling and onboard generation can be a point of major concern. In terms of performance, affordability, and lifetime, onboard hydrogen-generating subsystems must compete with what automobile manufacturers and consumers have seen in modern vehicles to date. Fuel cell vehicles have a high potential to reduce both energy consumption and carbon dioxide emissions.*

Keywords: hydrogen fuel; sustainability; green fuel; sustainable transportation; future mobility.

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